# United States Patent [19]

**Wheless**

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[54] SEPARATION OF LIGHT PARTICLES FROM HEAVY PARTICLES IN A STREAM OF PARTICULATE MATTER


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[52] U.S. Cl. ..... 131/110; 131/84.3

[58] Field of Search ..... 131/84.3, 110, 109.1, 131/169.2



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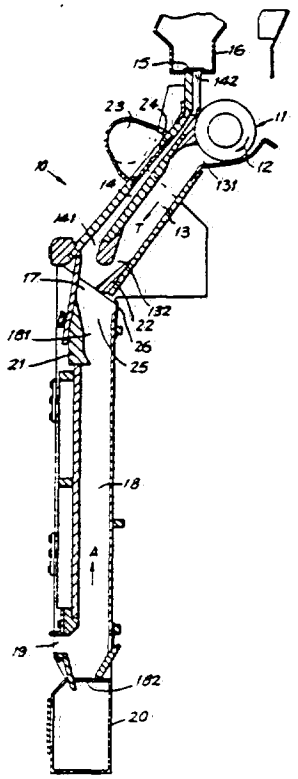
[57] ABSTRACT

A method and apparatus for separating light particles from heavy particles in a stream of particulate matter, particularly for separating stems from the stream of tobacco filler fed to a cigarette maker, is provided. The tobacco is introduced into a first chamber in which it travels generally downward to a fourth chamber communicating with second and third chambers, the second chamber being the chimney of the cigarette maker and the third chamber extending downward from the fourth chamber. An air stream flowing upward through the third chamber reverses the momentum of most of the light particles and propels them into the chimney, while the heavy particles (stems) and some light particles travel downward into the third chamber. As the light particles fall through the third chamber, their momentum is gradually reversed by the air stream and they rise through the fourth chamber into the chimney. The heavy particles are collected at the bottom of the third chamber.


7 Claims, 1 Drawing Sheet





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